

SR2010No4 Mobile Plant for Land-spreading Deployment Application

Trewindsor Farm & Hafod Farm

Applicant:

Stepside Agri Contractors (Gwbert Road, Cardigan, SA43 1PH)

Permit Number: EPR/AB3891CX

Date: 19/05/2021



1 About the permit

1a Discussions before your application

If you have had discussions with us before your application, give us the case reference or details on a separate sheet.

Case or document reference

1b Permit number

Permit number this application relates to

EPR/AB3891CX

1c What type of permit do you want to deploy under? (Please tick)

SR2010No4 Mobile plant for landspreading	(land treatment resulting i	in agricultural or ecological benefit)
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SR2010No5 Use of mobile plant for land reclamation, restoration or improvement of land

SR2010No6 Mobile plant for landspreading of sewage sludge

Bespoke mobile plant permit for landspreading or reclamation, restoration or improvement of land

2 About you

Please give us details of the permit holder. For companies, the details must match Companies House.

Organisation name (if relevant)	Stepside Agri	
Title	Mr	
First name	Daniel	
Last name	James	
Address	Stepside Farm	

	Gwbert Road
	Cardigan
Postcode	SA43 1PH
Telephone - mobile	07966521386
Telephone - office	01239621354
Email address	enquiries@stepside.biz

If you are applying as an organisation of individuals, every partner needs to give us their details, including their title. If necessary, continue on a separate sheet and tell us the reference you have given the sheet.

3 Contact details

Who can we talk to about your application? This can be someone acting as a consultant or 'agent' for you.

Title	Mr		
First name	David		
Last name	Powell		
Telephone - mobile	07968 496178		
Telephone - office			
Email address	dave.purlon@gmail.com		

4 About the deployment

4a Multiple deployments for one area of land

You may spread more than 10 waste streams on the same area of land, provided you submit additional fully completed deployment forms listing the additional wastes. Your benefit statement must take into account the total benefit to the land of all wastes to be spread.

Is this deployment one of a batch (multiple deployments) for the same area of land?

No 🛛 Go to section 4b

Yes D How many deployments are in the batch?

		1

4b Nominated competent person

4b1 Give us details of the nominated competent person. This is the person who will be responsible for compliance with the permit for this deployment. See the guidance notes on LPD1 for further details.

Title	Mr	
First name	David	
Last name	Powell	

Telephone - mobile	07968 496178
Telephone - office	
Email address	dave.purlon@gmail.com
4b2 What evidence are you using to	show the nominated competent person has suitab

4b2 What evidence are you using to show the nominated competent person has suitable technical skills and knowledge to manage the activity?

 An approved technical scheme
 ⊠
 Go to section 4b3

 Documented in-house training
 □
 You must provide evidence – see below.

You must provide evidence to show the documented in-house training meets the requirements set out in technical guidance. See the guidance notes on LPD1 for further details and give us the document reference.

 Document reference
 Go to section 4c

4b3 Which approved scheme are you using to show you have the suitable technical skills and knowledge to manage your facility?

CIWM / WAMITAB	\boxtimes
ESA / EU	

4b4 Tick to confirm you've included all original and continuing competence evidence.

4c Which risk band does the activity fall within?

Please complete Table 1 below to indicate which risk band your activity falls within. This is a combination of waste types and proximity to sensitive receptors.

Once you have selected the risk band your activity falls within, the form guidance tells you what additional information you need to send with the application.

The risk banding affects the fee you need to send with your deployment application. See section 6.

Table 1 – risk band						
	Lower risk location		High risk location			
	- Not in an SPZ 2, and/or		- In a Source Protecti	on Zone 2, and/or		
	- Over 500 meters from:		- 500 meters or less	from:		
	 European site, and/or 		 European site, and 	l/or		
	 Ramsar, and/or 		 Ramsar, and/or 			
	• SSSI		• SSSI			
Permit type			You <i>must</i> submit a s	ite specific risk assessr	nent.	
SR2010No4 List A wastes						
(Lower risk)	Low risk deployment		Medium risk (2) dep	bloyment		
SR2010No4 List B wastes	Medium risk (1) deplovment		Hiah risk deplovme	nt	\boxtimes	
(Higher risk)	······································					
SR2010No5						
(Any waste listed)	Medium risk (1) deployment		High risk deployme	nt		
SR2010No6	Medium risk (1) deployment	_	High risk deployme	ot		
(Any waste listed)						
Bespoke mobile plant permit	Low risk deployment	Medium ri	sk deployment 🛛	High risk deployment		

4d Additional information on sensitive receptors

Is the deployment within an SPZ 2 and/or 500m of a European site, Ramsar or SSSI, or being made under a bespoke permit?

 \boxtimes

No 🗆

Yes Xou must submit a site specific risk assessment (see question 4e).

4e Site specific risk assessment

Your site specific risk assessment must show how you intend to prevent any harm to any SPZ 2, European site, Ramsar or SSSI. For more information on risk-assessment please see the accompanying guidance to LPD1 and Technical Guidance Note 'TGN 8.01'.

Please tick a box below to indicate which type of risk-assessment you have submitted.

I have attached a site-specific risk-assessment as the deployment is within and SPZ 2 and/or 500m of a European site, Ramsar or SSSI. I have also addressed risks to other receptors in the risk assessment

I am not within an SPZ 2 and/or 500 m of a European site, Ramsar or SSSI but have addressed risks to the other receptors in my benefit statement.

I am deploying under a bespoke permit and have attached a site-specific risk assessment (regardless of location).

4f About the waste

Please list all the individual waste streams you want to spread/use under this deployment, in Table 2 below. We've included an example to help you.

Table 2 - waste types List of Waste Total amount being Waste description Physical form Waste producer code (6 digit) spread/used (tonnes) 03 03 05 De-inked paper Sludge Smith's Newsprint 500 e.g. 02 05 02 1 Sludge from dairy waste Liquid Sludge Dairy Partners -6150 treatment Newcastle Emlyn 2 02 05 02 Sludge from dairy waste Liquid Sludge Volac - Felinfach 5264 treatment 3 02 05 02 Sludge from dairy waste Liquid Sludge First Milk -3687 treatment Haverfordwest 4 N.B. Maximums for single waste stream 5 6 7 8 9 10 Total tonnage Max. 6150

Please note: You can only spread/use 10 waste types per deployment.

4g About the land you want to treat

4g1 Please give details of the main address of the land to be treated.

Address	Trewindsor Farm			
	Llangoedmor			
	Cardigan			
	Ceredigion			
Postcode	SA43 2LN			
National grid reference (12 digit)	SN 22205 47060			
4g2 What type of land do you want to treat?				
Agricultural land				

26/0032

Non-agricultural land

4h The parcels of land you want to treat

Please list all the individual areas (parcels) of land you want to include this deployment, in Table 3 below.

Please note: the total area to be treated must not be more than 50 hectares.

Tabl	Γable 3 – parcels of land						
	Field name/ number/ reference	Grid reference - centre of field (12 digit)	Waste types to be spread/used (List of Waste code) Separate using commas.	Size (hectares)			
1	Please see continuation sheet: Table 3 Details of land to be treated						
2							
3							
4							
5							
6							
7							
8							
9							
10							
			Total hectares	49.20			

4i Is the permit holder the owner or occupier of the land you want to spread on/treat?

Yes Go to section 4k

No

You must give us details of the land owner or occupier, below. \times

Mr

Organisation name (if relevant)

Title

First name			Lvnn	
Last name			Jones	
Address			Tygwyn Farm	
			Ferwig	
			Cardigan	
			Ceredigion	
Postcode			SA43 1PL	
Telephone	- mobil	e	07811 159517	
Telephone - office				
Email address				
If there is m of each. Ple	nore the	an one owner or occu ontinue on a separate	pant for the area covered by this deployment, s sheet and tell us the reference you have giver	you must give us details n the sheet.
Document i	referen	се	Farm Details	
4j Do you l	have tl	ne consent of the ov	vner or occupier to carry out the activity?	
Yes	\boxtimes	Go to section 4k		
No		You must tell us why you think you can carry out the activity without the consent of the occupier. Please give an explanation in the box, below. Continue on a separate sheet if needed.		
Explanation)			

4k Previous land treatment

Has any of the land listed in Table 3 been treated with other wastes, sewage sludge, slurries or manures etc. in the last 12 months?

No 🛛 Go to section 4I

Yes

□ You must give us details in Table 4 below *and* account for them in your benefit statement.

Table	Table 4 – previous land treatment						
	Field name/ number/ reference	Describe the waste spread (in last 12 months)	Person/ company who spread the waste	Quantity spread per hectare (in tonnes)	Deployment/ other reference (if known)		
e.g.	East field	Digested sewage sludge cake	Eastern Waters	20	PAN 000000		

1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

4I Waste storage

Are you proposing to store waste in connection with this deployment?

No 🗌 Go to section 5

GO IO SECIION S

Yes

 \boxtimes You must give us details in Table 5 below.

Tabl	Table 5 – waste storage details						
	Grid reference (12 digit)	Waste type being stored (6 digit List of Waste code)	Storage method	Quantity stored at any one time (in tonnes)			
1	SN 22048 46943	02 05 02	Field nurse tank	120			
2	SN 21836 47476	02 05 02	Field nurse tank	120			
3	SN 17956 50063	02 05 02	Above ground liquid storage tank	500			
4							
5							
6							
7							
8							
9							
10							

5 Payment

5a Tick an option below to show how you will pay for the application.

Electronic transfer (for example, BACS)	\boxtimes	Go to section 5b
Cheque		Go to section 5c
Postal order		Go to section 5d
Credit or debit card		Go to section 5e

5b Paying by electronic transfer

If you choose to pay by electronic transfer use the following information to make your payment.

Company name:	Natural Resources Wales
Company address:	Income Dept., PO BOX 663, Cardiff, CF24 0TP
Bank:	RBS
Address:	National Westminster Bank Plc, 2 ½ Devonshire Square, London, EC2M 4BA
Sort code:	60-70-80
Account number:	10014438

Reference number

You can use any reference number but we prefer the number to be 'EPDEP' followed by the first five letters of your organisation name followed by a four-digit number.

For example, for a company named Joe Bloggs Ltd, the reference number might be EPDEPJOEBL0001. (Remember you can use any four-digit number at the end.)

The reference number you will provide will appear on our bank statements so we can check your payment. We may need to contact your bank to make sure the reference number is quoted correctly.

You should also email your payment details and payment reference number to banking.team@naturalresourceswales.gov.uk / banking.team@cyfoethnaturiolcymru.gov.uk or fax it to 0300 065 3001 and enter it in the space provided below.

BACS reference	EPDEPSTEPS0064
Amount paid	£1,018

Making payments from outside the UK

These details have changed. If you are making your payment from outside the United Kingdom (which must be received in sterling), our IBAN number is GB70 NWBK6070 8010 0144 38 and our SWIFT/BIC number is NWBKGB2L.

If you do not quote your payment reference number, there may be a delay in processing your payment and application.

5c Paying by cheque or postal order

You should make cheques or postal orders payable to Natural Resources Wales and they should be marked 'A/c Payee'. We will not accept post-dated cheques (cheques with a future date written on them).

Cheque/ postal order number

Amount paid

5d Paying by credit or debit card

If you are paying by credit or debit card, please fill in the separate form CC1.

You can download this from our Website or you can ask for one of our customer service providers to send one by post. We will destroy your card details once we have processed your payment. We can accept payments by Visa, MasterCard or Maestro UK card only.

6 Supporting documents

You must provide all relevant documents to support your application. The information we need depends on the type of deployment application you're making. If you don't provide us with all the information we need, we won't be able to assess your proposal and the application may be rejected.

Better quality deployments result in shorter processing times. If we don't need to come back to you for more information, we'll be able to give you a decision quicker.

6a What supporting evidence do you need to send?

Are you applying to spread/use waste under a SR2010 No4 standard rule set permit?

Yes	\boxtimes	Complete the checklist in Table 6 and Table 7	Go to section 6b

No 🗆 Complete the checklist in Table 7 only. Go to section 6c

6b Checklist for deployments under SR2010 No4 only

Complete the checklist in Table 6, below. Tick to confirm you've completed the action.

Table 6	
Do the grid references (for fields and storage areas) match the map locations?	\boxtimes
Are the grid references in the correct format i.e. AB 12345 67890?	\boxtimes
Have details of previous land treatment been provided?	\boxtimes
Have you included a location map?	\boxtimes
Does the map include all the relevant features as set out in the guidance?	\boxtimes
Have you included a waste analysis?	\boxtimes
Is the waste analysis for each waste less than 12 months old?	\boxtimes
Does the waste analysis include pH, Nitrogen (N), Phosphorus (P), Potassium (K), % dry matter and Potentially Toxic Elements (PTE's)?	\boxtimes
Have you included a soil analysis?	\boxtimes
Is the soil analysis less for each field than 4 years old?	\boxtimes
Does the soil analysis provide the soil pH, Potassium (K), Phosphorus (P), Magnesium (Mg) and PTEs if they are high in the waste?	\boxtimes
Have the soil indices for P, K and Mg for each field been provided?	\boxtimes
Have you included a Certificate of Agricultural Benefit?	\boxtimes
Has the proposed cropping regime been stated?	\boxtimes
Has the waste application rate been stated?	\boxtimes
Has the timing of application been stated and is it appropriate for the cropping regime?	\boxtimes
Has the intended method of waste application been stated?	\boxtimes
Have the total nutrients supplied by the waste been stated and have they been provided in oxide format?	\boxtimes
Has the nutrient requirement for the proposed crop been provided?	\boxtimes
Has the soil nitrogen supply (SNS) for each field been provided?	\boxtimes

If the land has been treated with other wastes, sewage sludge, slurries manures etc. in the last 12 months, has relevant information been provided?	\boxtimes
If more than one waste stream is to be applied to the land; has the benefit for each individual waste stream been demonstrated?	\boxtimes
Have you included a site specific risk assessment? (where relevant)	\boxtimes
Does the Site Specific Risk Assessment; consider all potential receptors, identify all risks from the activity, and include information on all measures you'll use to minimise or mitigate the impact and why they're suitable.	\boxtimes

6c Checklist for all types of deployment application.

Complete the checklist in Table 7, below. Tick to confirm you've completed the action.

Table 7		
Item	Complete	Your document reference/ description
Location map (required for all deployments)	\boxtimes	
Benefit statement (required for all deployments)	\boxtimes	
Waste analysis (required for all deployments)	\boxtimes	
Receiving soil analysis (required for all deployments)	\boxtimes	
Site-specific risk assessment (in accordance with 4e)	\boxtimes	
Any other additional information	N/A	Table 3 Details of land to be treated
	N/A	Farm Details
	N/A	
	N/A	

7 The data Protection Act 1998

We, the Natural Resources Body for Wales (hereafter "Natural Resources Wales"), will process the information you provide so that we can:

- deal with your application;
- make sure you keep to the conditions of the licence, permit or registration;
- · process renewals; and
- keep the public registers up to date.

We may also process or release the information to:

- · offer you documents or services relating to environmental matters;
- consult the public, public organisations and other organisations (for example, the Health and Safety Executive, local authorities, the emergency services, the Department for Environment, Food and Rural Affairs) on environmental issues;
- · carry out research and development work on environmental issues;
- provide information from the public register to anyone who asks;
- prevent anyone from breaking environmental law, investigate cases where environmental law may have been broken, and take any action that is needed;
- · assess whether customers are satisfied with our service, and to improve our service; and
- respond to requests for information under the Freedom of Information Act 2000 and the Environmental Information Regulations 2004 (if the Data Protection Act allows).

We may pass the information on to our agents or representatives to do these things for us.

8 Confidentiality and national security

We will normally put all the information in your application on a public register of environmental information. However, we may not include certain information in the public register if this is in the interests of national security, or because the information is confidential.

You can ask for information to be made confidential by ticking the box below and enclosing a letter with your application giving your reasons. If we agree with your request, we will tell you and not include the information in the public register. If we do not agree with your request, we will let you know how to appeal against our decision, or you can withdraw your application.

Please treat the information in my application as confidential.

You can tell the Secretary of State that you believe including information on a public register would not be in the interests of national security. You must enclose a letter with your application telling us that you have told the Welsh Ministers and you must still include the information in your application. We will not include the information in the public register unless the Welsh Ministers decides that it should be included.

Only tick the box below if you are certain that you wish to claim confidentiality or national security for your application. This may delay your application.

I attach a letter stating that I have written to the Welsh Ministers explaining why my information should not be included on the public register for national security reasons

9 Declaration

You must read this section before making the declaration and sending your form to us.

A relevant person should make the declaration. You must be a relevant person or have the authority of a relevant person to sign this application on their behalf.

Relevant people means each applicant, and in the case of a company, a director, manager, company secretary or any similar officer or employee listed on current appointments in Companies House. In the case of a Limited Liability Partnership (LLP), it includes any partner. If the permit holder is an organisation of individuals, each individual (or individual trustee) must complete the declaration.

To simplify and speed up the application process we recommend that the declaration is filled in by an officer of a company or one of the partners in a Limited Liability Partnership (LLP).

If you wish a manager, employee or consultant etc. to sign the declaration on behalf of a relevant person, we will need written confirmation from a relevant person; that is, an officer of the company, a partner in the LLP or the individual, confirming that the person has the authority to fill in the declaration.

If you are joint permit holders you should each fill in your own declaration. We have provided a separate sheet for this.

Where the operator is the subject of any insolvency procedure, the declaration must be filled in by the official receiver/appointed insolvency practitioner.

9a Are you signing the form on *behalf of* a relevant person?

If you are *not* a relevant person, but want to sign the application on their behalf, you must include confirmation that you can do this.

I have included written confirmation from a relevant person to confirm I can sign on their behalf.

9b Does your deployment application relate to a standard facility permit?

If your deployment application is being made in relation to a standard facility permit (SRP), you also need to confirm that you are able to meet all relevant criteria of the standard rule set/sets under which you are applying.

I confirm that my activity/activities will fully meet the rules of the permit deployment I have applied for.

 \boxtimes

 \square

9c Sign to confirm you understand the declaration.

If you knowingly or recklessly make a statement which is false or misleading to help you get an environmental permit (for yourself or another person), you are committing an offence under the Environmental Permitting (England and Wales) Regulations 2016.

I declare that the information in this application is true to the best of my knowledge and belief. I understand that this application may be refused or approval withdrawn if I give false or incomplete information.

I understand that if I knowingly or recklessly make a false or misleading statement:

• I may be prosecuted; and

• if convicted, I may have to pay a fine and/or go to prison.

By signing below, you are confirming that you understand and agree with the declaration above.

Title	Mr	
First name	David	
Last name	Powell	

On behalf of (if relevant)

Mr Daniel James

Today's date (DD/MM/YYYY)

19/05/2021



Continuing Competence Certificate

This certificate confirms that

David Powell

Has met the relevant requirements of the Continuing Competence scheme for the following award(s) which will remain current for two years from 13/01/2020

AD LS Anaerobic Digestion Land Spreading

Expiry Date: 13/01/2022

Verification date: 03/01/2020 Authorised:

WAMITAB Chief Executive Officer



The Chartered Institution of Wastes Management

Learner ID: 21046 Certificate No.: 5157880 Date of Issue: 13/01/2020

CIWM Chief Executive Officer



00133014



Farm details for Trewindsor Farm & Hafod Farm Deployment

Lynn Jones Main farm Ty Gwyn Farm Ferwig Cardigan SA43 1PL

Holding number 55/226/0032

Mobile: 07811 159517

Trewindsor Farm - Grid reference SN 22205 47060 - Post code - SA43 2LN

Morris Davies Main farm Hafod Farm Ferwig Cardigan SA43 1PU

Holding number 55/226/0027

Mobile: 07974102696

Tyriet Fields 8 & 9 - Grid reference SN 18094 50342 - Post code - SA43 1PU

TABLE 3 Details of land to be treated

Field ref.	Spreadable	Grid reference (centre of	Waste type(s) to be spread		
	area (hectares)	fields)	(LoW)		
<u>Trewindsor Farm</u>					
Trewindsor 1 (29/30)	8.25	SN 21959 47209	02 05 02		
Trewindsor 2 (31)	5.50	SN 21891 47110	02 05 02		
Trewindsor 3 (32)	5.40	SN 21834 46975	02 05 02		
Trewindsor 4 (50)	4.30	SN 22221 46877	02 05 02		
Trewindsor 5 (52)	3.25	SN 22138 47403	02 05 02		
Trewindsor 6 (53)	6.20	SN 22242 47532	02 05 02		
Trewindsor 7 (51)	8.00	SN 21979 47600	02 05 02		
Hafod Farm					
Tyriet 8	3.80	SN 17655 50758	02 05 02		
Tyriet 9	4.50	SN 17428 50710	02 05 02		
TOTAL	49.20				

Мар Кеу	
	Non-Spreadable Section of Field
	No spread area (10 Metres Buffer to Watercourses)
	Suitable for Spreading
	Store
	Water Course (10 Metres Buffer)
•••••	Foot Path
	Spring, Well or Bore Hole (50 Metres Buffer)
\bigcirc	Other Features
	Nurse Tank

Farmer: Lynn Jones Map Grid Ref: SN 22008 47305 Farm ID: Ty Gwyn Fm – land at Trewindsor Fm Farm Post Code: SA43 2LN



Мар Кеу	
	Non-Spreadable Section of Field
	No spread area (10m to Watercourses)
	Suitable for Spreading
	Store
	Water Course (10 Metres Buffer)
•••••	Foot Path
	Spring, Well or Bore Hole (50 Metres Buffer)
\bigcirc	Other Features
	Nurse Tank
	SSSI
	SAC

Farmer: Morris Davies Map Grid Ref: SN 17570 50671 Farm ID: Hafod Farm (Tyriet) Farm Post Code: SA43 1PU



Statement of Agricultural Benefit – Trewindsor Farm & Hafod Farm



Applicant: Stepside Agri Contractors

Permit: SR2010 No4: mobile plant for land-spreading **Permit Number:** EPR/AB3891CX

Person with Technical Expertise:

Mr David Powell FACTS: FE/2981 WAMITAB CCC No: 5157880 Phone number: 07968 496178 Email: dave.purlon@gmail.com

Farm Addresses:

Trewindsor Farm, Llangoedmor, Cardigan, Ceredigion, SA43 2LN Hafod Farm, Ferwig, Cardigan, Ceredigion, SA43 1PU

Wastes to be applied:

Waste Code	Waste Description	Physical Form	Waste Producer
02 05 02	Waste from the dairy products industry – sludges	Liquid	Dairy Partners, Newcastle Emlyn
	from on-site effluent		
02 05 02	Waste from the dairy products industry – sludges from on-site effluent treatment	Liquid	Volac, Felinfach
02 05 02	Waste from the dairy products industry – sludges from on-site effluent treatment	Liquid	First Milk, Haverfordwest

Application:

- These grass silage fields will be spread subject to ground conditions being suitable and when there is a significant crop nutrient requirement (i.e. spring, after a cut of silage). Spreading of the grass fields will be split into multiple applications and the total of all applications will not exceed the max application rates for the fields as listed in table 1.
- Spreading of the waste will be carried out in accordance with the Code of Good Agricultural Practice ("Protecting our Water, Soil and Air. Defra, 2009) and in accordance with the requirements of the deployment and environmental permitting regulations.
- NRW will be informed at least 48 hours prior to any spreading commencing and no spreading will occur within 48 hours of forecasted heavy rainfall.
- The waste will be spread onto the grass fields with shallow injection equipment assuming ground conditions are suitable at the time of waste receipt or for Hafod Farm stored in an above ground liquid storage tank for future application when conditions are suitable and there is requirement for application. Should the ground or weather conditions mean it's unsuitable for spreading then contingency storage in nurse tanks may also be required. These potential locations are detailed on the attached field maps and within the LPD1 form.
- The maximum application rate for each field will be split into multiple applications and will not exceed 50t/ha in any one application to a field.
- Waste will not be stored or spread in combination (i.e. one waste stream per field).

Benefits from waste application:

- The analysis and nutrient content of the wastes are shown in the waste analysis attachments.
- The wastes are a source of nitrogen, phosphate, potassium, magnesium, sulphur, sodium & calcium. The wastes can be beneficially used to replace a proportion of bagged mineral fertiliser.
- At the proposed application rates for each of the wastes in this deployment the amount of total magnesium supplied by the wastes is 4-16kg MgO/ha.
- The risk of sulphur deficiency has been estimated as 'High' based on the soil texture and expected winter rainfall (RB209). The crop requirements are 120kg SO₃/ha. The amount of available sulphur supplied by the wastes at the proposed maximum application rates is 2-8kg SO₃/ha.
- The addition of sodium will improve the palatability of grass and is important in the diet for livestock health. The crop requirements for the grass fields are approximately 140kg/ha Na₂O to improve herbage mineral balances.
- The recommended maximum application rates are shown in Table 1 and have been made on a field by field basis using The Nutrient Management Guide (RB209).

Materials applied in previous 12 months:

These fields have received no materials in the previous 12 months.

Nutrients supplied by this application:

Rates of application (t/ha)	Nitrogen kg/ha		Phosphate (P₂O₅) kg/ha		Potash (K₂O) kg/ha		Magn (MgO)	esium kg/ha	Sulphur (SO₃) kg/ha		
	Total	Available	Total	Available	Total	Available	Total	Available	Total	Available	
Dairy Partners liquid sludge @ 125 t/ha	38	8	23	14	33	27	4	0	10	2	
Volac liquid sludge @ 107 t/ha	64	13	67	40	154	123	13	1	17	3	
First Milk liquid sludge @ 66 t/ha	79	16	80	48	21	17	9	1	21	4	
First Milk liquid sludge @ 119 t/ha	143	29	145	87	38	30	16	2	38	8	
Estimated Availability	20	20%		60%		80%		10%		20%	

Table 1: Field, Soil & Cropping Details, Fertiliser Recommendations and Application Rates

					Nitro	gen		Phosphate			Potash		Magnesium	
Field Ref.	Soil Type	Spreadable Area (ha)	Previous Crop	Next Crop	SNS	N Required (kg/ha)	P Index	P₂O₅ Required (kg/ha)	Crop Use (Offtake) (kg/ha)	K Index	K₂O Required (kg/ha)	Crop Use (Offtake) (kg/ha)	Mg Index	MgO Required (kg/ha)
Trewindsor Farm														
Trewindsor 1 (29/30)	Medium soils	8.25	Grass 3 cuts silage	Grass 3 cuts silage	Moderate	250	2	80	80	0	370	282	1	0
Trewindsor 2 (31)	Medium soils	5.50	Grass 3 cuts silage	Grass 3 cuts silage	Moderate	250	2	80	80	0	370	282	1	0
Trewindsor 3 (32)	Medium soils	5.40	Grass 3 cuts silage	Grass 3 cuts silage	Moderate	250	2	80	80	1	320	282	2	0
Trewindsor 4 (50)	Medium soils	4.30	Grass 3 cuts silage	Grass 3 cuts silage	Moderate	250	2	80	80	1	320	282	2	0
Trewindsor 5 (52)	Medium soils	3.25	Grass 3 cuts silage	Grass 3 cuts silage	Moderate	250	2	80	80	0	370	282	1	0
Trewindsor 6 (53)	Medium soils	6.20	Grass 3 cuts silage	Grass 3 cuts silage	Moderate	250	3	20	80	2-	280	282	2	0
Trewindsor 7 (51)	Medium soils	8.00	Grass 3 cuts silage	Grass 3 cuts silage	Moderate	250	3	20	80	2+	190	282	2	0
Hafod Farm (Tyriet)														
Tyriet 8	Medium soils	3.80	Grass 3 cuts silage	Grass 3 cuts silage	Moderate	250	1	110	80	1	320	282	2	0
Tyriet 9	Medium soils	4.50	Grass 3 cuts silage	Grass 3 cuts silage	Moderate	250	1	110	80	1	320	282	3	0
TOTAL		49.20												

Nutrient requirements based on:

Grass 3 cuts silage (23t FW/ha at 1st cut, 15t FW/ha at 2nd cut, 9t FW/ha at 3rd cut), silage 25% DM, totalling 1.7kg/t P2O5 and 6.0kg/t K2O removed in offtake Expected DM yields of grass 9-12t/ha, good grass growth class

			Dairy Partners, Newcastle E	mlyn - liquid sludge					Volac, Felini	linfach - liquid sludge First Milk, Haverfordwest - liquid sludge				First Milk, Haverfordwest - liquid sludge				
Field Ref.	N Applied - Waste (kg/ha)	P₂O₅ Applied - Waste (kg/ha)	K ₂ O Applied - Waste (kg/ha)	MgO Applied - Waste (kg/ha)	Application Rate (t/ha)	Total Tonnes	N Applied - Waste (kg/ha)	P₂O₅ Applied - Waste (kg/ha)	K₂O Applied Waste (kg/ha)	MgO Applied - Waste (kg/ha)	Application Rate (t/ha)	Total Tonnes	N Applied Waste (kg/ha)	P₂O₅ Applied Waste (kg/ha)	K₂O Applied - Waste (kg/ha)	MgO Applied - Waste (kg/ha)	Application Rate (t/ha)	Total Tonnes
Trewindsor Farm																		
Trewindsor 1 (29/30)	**8	*23	**27	**0	125	1031	**13	*67	**123	**1	107	883	**16	*80	**17	**1	66	545
Trewindsor 2 (31)	**8	*23	**27	**0	125	688	**13	*67	**123	**1	107	588	**16	*80	**17	**1	66	363
Trewindsor 3 (32)	**8	*23	**27	*4	125	675	**13	*67	**123	*13	107	578	**16	*80	**17	*9	66	356
Trewindsor 4 (50)	**8	*23	**27	*4	125	537	**13	*67	**123	*13	107	460	**16	*80	**17	*9	66	284
Trewindsor 5 (52)	**8	*23	**27	**0	125	406	**13	*67	**123	**1	107	348	**16	*80	**17	**1	66	214
Trewindsor 6 (53)	**8	*23	*33	*4	125	775	**13	*67	*154	*13	107	663	**16	*80	*21	*9	66	409
Trewindsor 7 (51)	**8	*23	*33	*4	125	1000	**13	*67	*154	*13	107	856	**16	*80	*21	*9	66	528
Hafod Farm (Tyriet)																		
Tyriet 8	**8	**14	**27	*4	125	475	**13	**40	**123	*13	107	407	**29	**87	**30	*16	119	452
Tyriet 9	**8	**14	**27	*4	125	563	**13	**40	**123	*13	107	481	**29	**87	**30	*16	119	536
TOTAL						6150						5264						3687

Waste will NOT be spread or stored in combination (i.e. one waste stream per field)

* Total nutrient content of waste used on P, K or Mg index 2 or above

** Available nutrient content of waste used on P, K or Mg index 0 or 1

The assumed availability of total nutrients in the wastes are N 20%, P_2O_5 60%, K_2O 80%, MgO 10%, SO₃ 20%

Potential negative impacts from this application and mitigation measures planned:

Waste Composition & Receiving Soils

- Potentially Toxic Elements: The supplied concentrations at the proposed application rates are lower than the maximum permissible levels detailed in the Sludge (Use in Agriculture) Regulations for biosolids applied to agriculture, which is believed to be a suitable comparison for wastes applied to agricultural land.
- Physical contaminants: The wastes are produced by managed processes. The liquid wastes do not contain physical contaminants.
- Waste pH: The wastes are acidic in nature. The acidic nature is most probably associated with the presence of food based organic acids. Acidic food-based wastes are routinely applied to agricultural land without adverse effects on crop health, or significant decreases in soil pH. Use of the Dairy Partners, Volac & First Milk wastes will be carefully monitored through low rates of individual application across the growing season and close monitoring of crop health, for any adverse signs resulting from acidity around roots.
- Receiving soils are below the limits set for grassland & arable soils under the Sludge (Use in Agriculture) Regulations.
- Soils have been sampled to 7.5cm depth for permanent grass fields & to 15cm depth for temporary grass fields with a 'half cheese' corer soil sampler walking a 'W' pattern across each field collecting approx. 25 sub samples per field.

Operations

The fields in this deployment have been designated as 'high risk' following site checks on the proximity to surrounding protected areas (e.g. SSSIs) and groundwater source protection zones. On the basis of 'high risk' the proposed operation will be subject to a site-specific risk assessment for deploying mobile plant under a SR2010 No.4. The potential risks associated with the application of waste on this deployment have been identified as;

- Potential run-off after application: The wastes will be applied following the Codes of Good Agricultural Practice. The maximum application rate for each field will be split into multiple applications and will not exceed 50t/ha in any one application to a field.
- The fields are in an NVZ. Records will be kept such that a total nitrogen loading per field is recorded within any 12-month period.
- Odour may potentially be emitted from the spreading of waste to mitigate odour generation all handling of waste will be done in accordance with current regulations and relevant mitigation strategies will be adopted e.g. waste will be subsurface injected. If any odour complaints are received, further odour mitigation methods will be implemented.
- Spillages: all spillages will be reported immediately to NRW.
- No waste will be spread within 10m of any ditch, pond or surface water, within 50m of any spring, well, borehole, or reservoir that supplies water for human consumption or farm dairies.
- Waste will be spread on delivery (or securely stored as stated above). Operators will aim to empty spreading equipment before the end of each working day to avoid overnight storage of waste in machinery.
- Regular servicing of all machinery is conducted and spreading equipment is annually calibrated. To prevent waste being held in faulty machinery replacement spreading equipment will be available.
- Spreading machinery will travel over the field in a direction which will most easily allow the machinery to turn within the boundaries of the field. Any spreading equipment will be turned off and/or lifted out of the soil prior to turning at the end of each run.
- Machinery turns will be routed to avoid rutting and wheel slip. The turns will not be executed on any buffer strips.
- There will be sufficient trained staff available to ensure that the operation continues throughout operational hours (i.e. there will be sufficient cover for illness, holiday etc.).
- Rights of way have been marked on the spread risk maps.
- Weather conditions will be monitored prior to spreading with wind speed and direction assessed.
- Consideration for the public and local residential receptors will be taken before and during application.

Signed: David Powell	Date: 19/05/2021

Site Specific Risk Assessment

Risk assessment for proposed land-spreading activity – Trewindsor Farm & Hafod Farm

Risk assessment carried out by: D J Powell Date: May 2021

		Data					Action		
Receptor What is at risk? What do I wish to protect?	Source The agent or process with potential to cause harm	Harm The harmful consequences if things go wrong	Pathway How the receptor might come into contact with the source	Probability of exposure How likely is this contact?	Consequence Severity of the consequences if this occurs	Magnitude of risk The overall magnitude of the risk	<i>Justification for magnitude</i> Basis of my judgement	Risk management How I can best manage the risk to reduce the magnitude	Residual risk Magnitude of the risk after management
Surface water – ditches, watercourses and ponds	Nutrients, organic matter and solids	Surface water pollution	Direct application to surface water, underdrainage and run off	Low	High	Medium	No spread areas, buffer zones in place and materials sub surface injected.	Comply with COGAP, Sludge Regs and EPR. Spreading to be only undertaken when conditions are suitable. No spreading areas enforced as per plans attached to application.	Low
Groundwater /Soils	Nutrients and PTES	Groundwater pollution and excessive nutrient build up	Over-application to land	Low	High	Low	The materials have low PTEs to be applied at proposed rates as detailed in application. The materials are low in available nitrogen. Phosphate applied is equal to or less than crop recommendations.	Appropriate rate and timing of application. Comply with COGAP, EPR and Sludge Regs. Carry out soil analysis of all fields regularly. Fields sub surface injected. No spreading within 50m of a spring, borehole or well.	Low
Humans and animals	Spreading activities – physical	Harm to humans or animals	Trespass, accidental contact	Low	Medium	Low	Agricultural areas with limited public access.	Application during appropriate conditions & awareness of access issues.	Low
Soils	Physical damage to soil structure	Damage to soil structure and poor subsequent crop yields	Delivery and spreading activity	Low	Medium	Low	Delivery and spreading to be undertaken under appropriate ground conditions using low ground pressure equipment.	Comply with COGAP and Cross Compliance Criteria. Apply only in suitable conditions.	Low

Risk Assessment continued

		Data			J	ludgement		Action		
<i>Receptor</i> What is at risk? What do I wish to protect?	Source The agent or process with potential to cause harm	Harm The harmful consequences if things go wrong	Pathway How the receptor might come into contact with the source	Probability of exposure How likely is this contact?	Consequence Severity of the consequences if this occurs	Magnitude of risk The overall magnitude of the risk	<i>Justification for magnitude</i> Basis of my judgement	<i>Risk management</i> How I can best manage the risk to reduce the magnitude	<i>Residual risk</i> Magnitude of the risk after management	
Soils	PTE addition	Build-up of PTEs.	Spreading activity	Low	Medium	Low	Low levels of PTEs in wastes.	Comply with COGAP, Cross Compliance and Sludge Regs. Apply at specified rates. Soils sampled regularly.	Low	
Soils	Nutrient build up	Reduced yield quality and quantity of subsequent crops, nutrient leaching, runoff to sensitive receptors & surface water	Spreading activity, over application	Low	Medium	Low	Wastes applied at specified rates. The materials are low in available nitrogen. Phosphate applied is equal to or less than crop recommendations.	Apply according to RB209 recommendations and COGAP. Application rates in agricultural benefit statement not to be exceeded. Carry out soil analysis of all fields regularly.	Low	
Air	Odour during stockpiling and spreading activities	Odour issues and complaints	Airborne compounds	Medium	Medium	Medium	Nearby residents often sensitive to odour.	Sub surface injection on grass fields. Prevailing wind direction will be monitored.	Low	
Air	Dust during spreading	Dust complaints	Dust during windy conditions	Low	Low	Low	Materials have low potential for dust.	Assess wind speed and direction before spreading and proximity to surrounding receptors. Spread when conditions are suitable.	Low	
Air/People	Noise	Noise complaints	Noise from delivery, and spreading	Low	Low to Medium	Low	Agricultural machinery in agricultural areas.	Avoid sensitive spreading periods where possible e.g. bank holidays and weekends. Delivery during daylight hours where possible	Low	
Hedgerows and trees	Physical damage from spreading equipment	Ecological + landscape	Physical damage from spreading equipment	Low	Low	Low	Experienced operators employed & instructed to take care around trees	Leave a 2.0m minimum buffer zone adjacent to trees, shrubs and hedges.	Low	

Data			Judgement				Action		
Receptor What is at risk? What do I wish to protect?	Source The agent or process with potential to cause harm	Harm The harmful consequences if things go wrong	Pathway How the receptor might come into contact with the source	Probability of exposure How likely is this contact?	Consequence Severity of the consequences if this occurs	<i>Magnitude of risk</i> The overall magnitude of the risk	<i>Justification for magnitude</i> Basis of my judgement	Risk management How I can best manage the risk to reduce the magnitude	Residual risk Magnitude of the risk after management
Aberarth-Carreg Wylan SSSI	Deterioration of site through contamination, nutrient enrichment, habitat loss, smothering	Harm to protected site through contamination, nutrient enrichment, disturbance etc.	Spreading activity, airbourne compounds, flooding, nutrient run off or leaching	Low	Medium	Medium	No spreading areas to watercourses. Sub surface injection of material for grass fields and spreading at appropriate timings. Proximity of fields from SSSI	Assess wind speed and direction before spreading and proximity to surrounding receptors when spreading all fields but the Hafod Farm fields in particular in relation to this SSSI. Spread when conditions are suitable with no or little wind and when the potential of any gusts is not in the direction of the SSSI. Material sub surface injected for grass fields. 10m no spread areas enforced to watercourses. Ensure field conditions are appropriate for spreading.	Low
Local human population and local environment	Flooding of site	If waste is washed off site, it may contaminate buildings / gardens / natural habitats downstream.	Flood waters	Low	Medium	Medium	Spreading undertaken only on fields at appropriate timings.	No spreading in periods where heavy rain is forecast or if land is waterlogged. Spreading operator to employ 10m no spreading areas as per attached plans to watercourses.	Low

Data				J	ludgement		Action		
Receptor What is at risk? What do I wish to protect?	Source The agent or process with potential to cause harm	Harm The harmful consequences if things go wrong	Pathway How the receptor might come into contact with the source	Probability of exposure How likely is this contact?	Consequence Severity of the consequences if this occurs	<i>Magnitude of risk</i> The overall magnitude of the risk	Justification for magnitude Basis of my judgement	Risk management How I can best manage the risk to reduce the magnitude	<i>Residual risk</i> Magnitude of the risk after management
Caeau Crug Bychan SSSI	Deterioration of site through contamination, nutrient enrichment, habitat loss, smothering	Harm to protected site through contamination, nutrient enrichment, disturbance etc.	Spreading activity, airbourne compounds, flooding, nutrient run off or leaching	Low	Medium	Medium	No spreading areas to watercourses. Sub surface injection of material for grass fields and spreading at appropriate timings. Proximity of fields from SSSI	Assess wind speed and direction before spreading and proximity to surrounding receptors when spreading all fields but the Hafod Farm fields in particular in relation to this SSSI. Spread when conditions are suitable with no or little wind and when the potential of any gusts is not in the direction of the SSSI. Material sub surface injected for grass fields. 10m no spread areas enforced to watercourses. Ensure field conditions are appropriate for spreading.	Low

Data				J	Action				
Receptor What is at risk? What do I wish to protect?	Source The agent or process with potential to cause harm	Harm The harmful consequences if things go wrong	Pathway How the receptor might come into contact with the source	Probability of exposure How likely is this contact?	Consequence Severity of the consequences if this occurs	<i>Magnitude of risk</i> The overall magnitude of the risk	Justification for magnitude Basis of my judgement	Risk management How I can best manage the risk to reduce the magnitude	<i>Residual risk</i> Magnitude of the risk after management
Cardigan Bay SAC (- in particular the bottlenose dolphin)	Deterioration of site through contamination, nutrient enrichment, habitat loss, smothering	Harm to protected site through contamination, nutrient enrichment, disturbance etc. Impact on the habitats of the bottlenose dolphin and other habitats	Spreading activity, airbourne compounds, flooding, nutrient run off or leaching	Low	Medium	Medium	No spreading areas to watercourses. Sub surface injection of material for grass fields and spreading at appropriate timings.	Assess wind speed and direction before spreading and proximity to surrounding receptors when spreading all fields but the Hafod Farm fields in particular in relation to this SAC. Spread when conditions are suitable with no or little wind and when the potential of any gusts is not in the direction of the SAC. Material sub surface injected for grass fields. 10m no spread areas enforced to watercourses. Ensure field conditions are appropriate for spreading.	Low

Data			Judgement				Action		
Receptor What is at risk? What do I wish to protect?	Source The agent or process with potential to cause harm	Harm The harmful consequences if things go wrong	Pathway How the receptor might come into contact with the source	Probability of exposure How likely is this contact?	Consequence Severity of the consequences if this occurs	<i>Magnitude of risk</i> The overall magnitude of the risk	Justification for magnitude Basis of my judgement	Risk management How I can best manage the risk to reduce the magnitude	<i>Residual risk</i> Magnitude of the risk after management
West Wales Marine SAC (- in particular the European Protected Species - the harbour porpoise)	Deterioration of site through contamination, nutrient enrichment, habitat loss, smothering	Harm to protected site through contamination, nutrient enrichment, disturbance etc. Impact on the habitats of the harbour porpoise and other habitats	Spreading activity, airbourne compounds, flooding, nutrient run off or leaching	Low	Medium	Medium	No spreading areas to watercourses. Sub surface injection of material for grass fields and spreading at appropriate timings.	Assess wind speed and direction before spreading and proximity to surrounding receptors when spreading all fields but the Hafod Farm fields in particular in relation to this SAC. Spread when conditions are suitable with no or little wind and when the potential of any gusts is not in the direction of the SAC. Material sub surface injected for grass fields. 10m no spread areas enforced to watercourses. Ensure field conditions are appropriate for spreading.	Low

DAIRY PARTNERS, NEWCASTLE EMLYN

Analysis of Liquid Waste

Report No: 19446 Date: 21/08/2020

Application rate (t/ha)	125.0
Application rate (t/acre)	50.6
рН	5.21
Dry solids (%)	0.78

Organic Matter (%)

NUTRIENT CONTENT

0.46

			То	otal	Avai	lable
TOTALS	result	units	(kg/t)	(kg/ha)	(kg/t)	(kg/ha)
Nitrogen (N)	0.03	%	0.3	38	0.1	8
Ammonium-N	69	mg/kg	0.1	9		
Phosphorus (P)	79.5	mg/kg	0.1	10		
Phosphate (P ₂ O ₅)			0.2	23	0.1	14
Potassium (K)	221	mg/kg	0.2	28		
Potash (K ₂ O)			0.3	33	0.2	27
Magnesium (Mg)	20.5	mg/kg	0.0	3		
Magnesium (MgO)			0.0	4	0.0	0
Sulphur (S)	32.2	mg/kg	0.0	4		
Sulphur (SO ₃)			0.1	10	0.0	2

POTENTIALLY TOXIC ELEMENTS

			Ra	ate	Limit
TOTALS	result	units	(g/tonne)	(kg/ha)	(kg/ha/yr)
Zinc	2.01	mg/kg	2.01	0.25	15.00
Copper	0.20	mg/kg	0.20	0.03	7.50
Nickel	0.20	mg/kg	0.20	0.03	3.00
Lead	0.50	mg/kg	0.50	0.06	15.00
Cadmium	0.01	mg/kg	0.01	0.00	0.15
Chromium	0.20	mg/kg	0.20	0.03	15.00
Mercury	0.05	mg/kg	0.05	0.01	0.10

All results expressed on sample as received. The copper, nickel, lead, cadmium, chromium and mercury concentrations are less than the minimum level of detection, consequently, the calculated values will be less than those shown



STEPSIDE AGRI	DAIR	Y PARTNERS LT	٢D
GWBERT ROAD	EFFL	UENT	
CARDIGAN			
SA43 1PH V850			
Please quote above code for all enquiries			
EFF	LUENT		
		Laborato	bry References
Sample Reference :	Report Sampl	: Number e Number	19446 98842
DAIRY PARTNERS LTD		Date Receiv	ed 21-AUG-2020
Sample Matrix : EFFLUENT		Date Report	ed 02-SEP-2020
The sample submitted was of adequate size to complete all analysis The sample will be kept under refrigeration for at least 3 weeks. ANALYTICAL RESULTS on 'as rece	s requested. ived' basis		
Determinand		Value	Units
Oven Dry Solids		0.780	%
E Coli [Fresh]		10	cfu/g
Conductivity 1:6		820	uS/cm
Total Kjeldahl Nitrogen		0.03	% w/w
Nitrate Nitrogen		<10	mg/kg
Ammonium Nitrogen		69.0	mg/kg
Total Phosphorus (P)		79.5	mg/kg
Total Potassium (K)		221	mg/kg
Total Magnesium (Mg)		20.5	mg/kg
Total Copper (Cu)		<0.2	mg/kg

NRM Laboratories is a division of Cawood Sc

Date ...

acknell, Berkshire RG42 6NS Registered Number: 0565571

02/09/20

NRM Coopers Bridge, Braziers Lane, Bracknell, Berkshire RG42 6NS Tel: +44 (0) 1344 886338 Fax: +44 (0) 1344 890972 Email: enquiries@nrm.uk.com www.nrm.uk.com

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STEPSIDE AGRI		DAIRY H	PARTNERS LTD	
STEPSIDE FARM				
GWBERT ROAD		EFFLUE	NT	
CARDIGAN				
SA43 1PH	/850			
Please guote above code for	r all enquiries			
	EFFLU	JENT		
			Laboratory R	eferences
Sample Reference :		Report Nu Sample Nu	mber umber	19446 98842
DAIRY PARTNERS LTD			Data Reasived	21 ALIC 2020
Sample Matrix : EFFLUENT		Date Reported	02-SEP-2020	
The sample submitted was of adequate size to complete	all analysis requ	lested		
The sample submitted was of adequate size to complete The sample will be kept under refrigeration for at least 3 v	weeks.			
ANALYTICAL RESULTS on 'a	s receive	d' basis.		
Determinand			Value	Units
Total Zinc (Zn)			2.01	mg/kg
Total Sulphur (S)			32.2	mg/kg
Total Calcium (Ca)			113	mg/kg
Total Lead (Pb)			<0.5	mg/kg
Total Cadmium (Cd)			<0.01	mg/kg
Total Mercury (Hg)			<0.05	mg/kg
Total Nickel (Ni)			<0.2	mg/kg
Total Chromium (Cr)			<0.2	mg/kg
Total Sodium (Na)	Total Sodium (Na)			
pH 1:6 [Fresh]			5.21	

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entific Ltd. Co



	STEPSIDE AGRI STEPSIDE FARM GWBERT ROAD CARDIGAN SA43 1PH	-	DAIRY I EFFLUE	PARTNERS LTD NT	
	V850				
	Please quote above code for all enquiries	S			
	EFF	FLUE	ENT		
-				Laboratory R	References
Sa	imple Reference :		Report Nu Sample Nu	mber umber	19446 98842
	DAIRY PARTNERS LTD				
Sa	Imple Matrix : EFFLUENT			Date Received	21-AUG-2020
	•				02-3EF-2020
The	sample submitted was of adequate size to complete all analysis sample will be kept under refrigeration for at least 3 weeks	s reques	sted.		
	ANALYTICAL RESULTS on 'as rece	eived'	basis.		
	Determinand			Value	Units
	Organic Matter LOI			0.46	% w/w
	Coliforms [fresh]			15000	cfu/g
	Oils, Fats and Grease			1960	mg/kg
	Salmonella spp [fresh]			Negative	in 25g
	EC [Neat]			4689	uS/cm
Ľ					

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Date

rkshire RG42 6NS Registered Number: 056557

02/09/20

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VOLAC, FELINFACH

Analysis of Liquid Waste

Report No: 99545 Date: 28/05/2020

Application rate (t/ha)	107.0
Application rate (t/acre)	43.3
pH	6.47
Dry solids (%)	1.04

Organic Matter	(%)
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NUTRIENT CONTENT

0.36

			Total		Available	
TOTALS	result	units	(kg/t)	(kg/ha)	(kg/t)	(kg/ha)
Nitrogen (N)	0.06	%	0.6	64	0.1	13
Ammonium-N	519	mg/kg	0.5	56		
Phosphorus (P)	275	mg/kg	0.3	29		
Phosphate (P ₂ O ₅)			0.6	67	0.4	40
Potassium (K)	1199	mg/kg	1.2	128		
Potash (K ₂ O)			1.4	154	1.2	123
Magnesium (Mg)	73.4	mg/kg	0.1	8		
Magnesium (MgO)			0.1	13	0.0	1
Sulphur (S)	62	mg/kg	0.1	7		
Sulphur (SO ₃)			0.2	17	0.0	3

POTENTIALLY TOXIC ELEMENTS

			Ra	ate	Limit
TOTALS	result	units	(g/tonne)	(kg/ha)	(kg/ha/yr)
Zinc	3.33	mg/kg	3.33	0.36	15.00
Copper	0.20	mg/kg	0.20	0.02	7.50
Nickel	0.20	mg/kg	0.20	0.02	3.00
Lead	0.50	mg/kg	0.50	0.05	15.00
Cadmium	0.01	mg/kg	0.01	0.00	0.15
Chromium	0.20	mg/kg	0.20	0.02	15.00
Mercury	0.05	mg/kg	0.05	0.01	0.10

All results expressed on sample as received. The copper, nickel, lead, cadmium, chromium and mercury concentrations are less than the minimum level of detection, consequently, the calculated values will be less than those shown



STEPSIDE AGRI STEPSIDE FARM GWBERT ROAD CARDIGAN SA43 1PH V850 Please quote above code for all enquiries	STEPSIDE AGRI EFFLUENT		
EFF	LUENT		
		Laboratory R	eferences
Sample Reference :	Report Nu Sample Nu	mber umber	99545 96050
VOLAC-EFFLUENT	<u> </u>	Data Dessived	20 MAX 2020
Sample Matrix : EFFLUENT		Date Reported	28-IMA 1-2020 04-JUN-2020
The sample will be kept under refrigeration for at least 3 weeks. ANALYTICAL RESULTS on 'as recently Determinand	ived' basis.	Value	Units
Oven Dry Solids		1.04	%
E Coli [Fresh]		370	cfu/g
Conductivity 1:6		2030	uS/cm
Total Kjeldahl Nitrogen		0.06	% w/w
Nitrate Nitrogen		<10	mg/kg
Ammonium Nitrogen		519	mg/kg
Total Phosphorus (P)		275	mg/kg
Total Potassium (K)		1199	mg/kg
Total Magnesium (Mg)		73.4	mg/kg
Total Copper (Cu)		<0.2	mg/kg

Released by Myles Nicholson

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Date

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04/06/20

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STEPSIDE AGRI STEPSIDE FARM GWBERT ROAD CARDIGAN SA43 1PH V850 Please quote above code for all enquiries		STEPSID	DE AGR	I	
EFF	LUE	NT			
	Γ			Laboratory R	eferences
Sample Reference :		Report Nui Sample Ni	mber Imber		99545 96050
VOLAC-EFFLUENT	L				
Sample Matrix : EEELLENT			Date I	Received	28-MAY-2020
			Date I	Reported	04-JUN-2020
The sample will be kept under refrigeration for at least 3 weeks. ANALYTICAL RESULTS on 'as recently and the same set of the	ived'	basis.			Lipito
Determinand				value	Units
Total Zinc (Zn)				3.33	mg/kg
Total Sulphur (S)				62.0	mg/kg
Total Calcium (Ca)				373	mg/kg
Total Lead (Pb)			,	<0.5	mg/kg
Total Cadmium (Cd)			,	<0.01	mg/kg
Total Mercury (Hg)			,	<0.05	mg/kg
Total Nickel (Ni)			,	<0.2	mg/kg
Total Chromium (Cr)				<0.2	mg/kg
Total Sodium (Na)				969	mg/kg
pH 1:6 [Fresh]				6.47	

Released by Myles Nicholson

Date

04/06/20

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STEPSIDE AGRI STEPSIDE FARM GWBERT ROAD CARDIGAN SA43 1PH V85 Please quote above code for all end	0 Buiries	SIDE AGRI JENT	
E	FFLUENT		
		Laboratory R	References
Sample Reference :	Report	Number	99545
	Sample	Number	96050
VOLAC-EFFLUENT		Date Received	28-MAY-2020
Sample Matrix : EFFLUENT		Date Reported	04-JUN-2020
The sample submitted was of adequate size to complete all and The sample will be kept under refrigeration for at least 3 weeks ANALYTICAL RESULTS on 'as ref	alysis requested. ecceived' basis		
Determinand		Value	Units
Organic Matter LOI		0.36	% w/w
Coliforms [fresh]		1500	cfu/g
Oils,Fats and Grease		1080	mg/kg
Salmonella spp [fresh]		Negative	in 25g
EC [Neat]		10470	uS/cm

Released by Myles Nicholson

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Date

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04/06/20

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rs Brida

FIRST MILK, HAVERFORDWEST

Analysis of Liquid Waste

Report No: 19447 Date: 21/08/2020

Application rate (t/ha)	66.0
Application rate (t/acre)	26.7
рН	5.77
Dry solids (%)	3.15

Organic Matter (%) 2.25

NUTRIENT CONTENT

			Total		Avai	lable
TOTALS	result	units	(kg/t)	(kg/ha)	(kg/t)	(kg/ha)
Nitrogen (N)	0.12	%	1.2	79	0.2	16
Ammonium-N	109	mg/kg	0.1	7		
Phosphorus (P)	531	mg/kg	0.5	35		
Phosphate (P ₂ O ₅)			1.2	80	0.7	48
Potassium (K)	265	mg/kg	0.3	17		
Potash (K ₂ O)			0.3	21	0.3	17
Magnesium (Mg)	82.2	mg/kg	0.1	5		
Magnesium (MgO)			0.1	9	0.0	1
Sulphur (S)	129	mg/kg	0.1	9		
Sulphur (SO ₃)			0.3	21	0.1	4

POTENTIALLY TOXIC ELEMENTS

			Ra	ate	Limit
TOTALS	result	units	(g/tonne)	(kg/ha)	(kg/ha/yr)
Zinc	8.43	mg/kg	8.43	0.56	15.00
Copper	0.24	mg/kg	0.24	0.02	7.50
Nickel	0.20	mg/kg	0.20	0.01	3.00
Lead	0.50	mg/kg	0.50	0.03	15.00
Cadmium	0.01	mg/kg	0.01	0.00	0.15
Chromium	0.66	mg/kg	0.66	0.04	15.00
Mercury	0.05	mg/kg	0.05	0.00	0.10

All results expressed on sample as received. The nickel, lead, cadmium and mercury concentrations are less than the minimum level of detection, consequently, the calculated values will be less than those shown

FIRST MILK, HAVERFORDWEST

Analysis of Liquid Waste

Report No: 19447 Date: 21/08/2020

Application rate (t/ha)	119.0
Application rate (t/acre)	48.2
рН	5.77
Dry solids (%)	3.15

Organic Matter (%)

NUTRIENT CONTENT

2.25

			Total		Available	
TOTALS	result	units	(kg/t)	(kg/ha)	(kg/t)	(kg/ha)
Nitrogen (N)	0.12	%	1.2	143	0.2	29
Ammonium-N	109	mg/kg	0.1	13		
Phosphorus (P)	531	mg/kg	0.5	63		
Phosphate (P ₂ O ₅)			1.2	145	0.7	87
Potassium (K)	265	mg/kg	0.3	32		
Potash (K ₂ O)			0.3	38	0.3	30
Magnesium (Mg)	82.2	mg/kg	0.1	10		
Magnesium (MgO)			0.1	16	0.0	2
Sulphur (S)	129	mg/kg	0.1	15		
Sulphur (SO ₃)			0.3	38	0.1	8

POTENTIALLY TOXIC ELEMENTS

			Rate		Limit
TOTALS	result	units	(g/tonne)	(kg/ha)	(kg/ha/yr)
Zinc	8.43	mg/kg	8.43	1.00	15.00
Copper	0.24	mg/kg	0.24	0.03	7.50
Nickel	0.20	mg/kg	0.20	0.02	3.00
Lead	0.50	mg/kg	0.50	0.06	15.00
Cadmium	0.01	mg/kg	0.01	0.00	0.15
Chromium	0.66	mg/kg	0.66	0.08	15.00
Mercury	0.05	mg/kg	0.05	0.01	0.10

All results expressed on sample as received. The nickel, lead, cadmium and mercury concentrations are less than the minimum level of detection, consequently, the calculated values will be less than those shown



STEPSIDE AGRI STEPSIDE FARM GWBERT ROAD CARDIGAN SA43 1PH V850 Please quote above code for all enquiries	FIRST I	MILK ENT				
EFF	LUENT					
Sample Reference : FIRST MILK	Report N Sample N	Laboratory F umber Number	References 19447 98843			
Sample Matrix : EFFLUENT		Date Received Date Reported	02-SEP-2020			
The sample submitted was of adequate size to complete all analysis requested. The sample will be kept under refrigeration for at least 3 weeks. ANALYTICAL RESULTS on 'as received' basis.						
Determinand		Value	Units			
Oven Dry Solids		3.15	%			
E Coli [Fresh]		100	cfu/g			
Conductivity 1:6		948	uS/cm			
Total Kjeldahl Nitrogen		0.12	% w/w			
Nitrate Nitrogen		<10	mg/kg			
Ammonium Nitrogen		109	mg/kg			
Total Phosphorus (P)		531	mg/kg			
Total Potassium (K)		265	mg/kg			
Total Magnesium (Mg)		82.2	mg/kg			
Total Copper (Cu)		0.24	mg/kg			

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Date 02/09/20

acknell, Berkshire RG42 6NS Registered Number: 0565571

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pers Bridge, Braziers Lane, Br

entific Ltd. Coor



STEPSIDE AGRI		FIRST M	ILK					
STEPSIDE FARM			NT					
CARDIGAN		EFFLUE	IN I					
SA43 1PH								
	J							
Flease quote above code for all enqu								
EFFLUENT								
Sampla Deference :	[Poport Nu	Laboratory	References				
		Sample Nu	umber	98843				
			Date Received	21-AUG-2020				
Sample Matrix : EFFLUENT			Date Reported	02-SEP-2020				
The sample submitted was of adequate size to complete all anal The sample will be kept under refrigeration for at least 3 weeks. ANALYTICAL RESULTS on 'as rec	ysis request	basis.						
Determinand			Value	Units				
Total Zinc (Zn)			8.43	mg/kg				
Total Sulphur (S)			129	mg/kg				
Total Calcium (Ca)			244	mg/kg				
Total Lead (Pb)			<0.5	mg/kg				
Total Cadmium (Cd)			<0.01	mg/kg				
Total Mercury (Hg)			<0.05	mg/kg				
Total Nickel (Ni)			<0.2	mg/kg				
Total Chromium (Cr)			0.66	mg/kg				
Total Sodium (Na)			875	mg/kg				
pH 1:6 [Fresh]			5.77					

Date .

02/09/20

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STEPSIDE AGRI STEPSIDE FARM GWBERT ROAD CARDIGAN SA43 1PH	FIRST M EFFLUE	AILK ENT					
Please quote above code for all enquir	ies						
EFFLUENT							
Sample Reference :	Report Nu Sample N	Laboratory R umber lumber	References 19447 98843				
FIRST MILK Sample Matrix : EFFLUENT		Date Received Date Reported	21-AUG-2020 02-SEP-2020				
The sample submitted was of adequate size to complete all analy The sample will be kept under refrigeration for at least 3 weeks. ANALYTICAL RESULTS on 'as rec	sis requested. eived' basis.						
Determinand		Value	Units				
Organic Matter LOI		2.25	% w/w				
Coliforms [fresh]		15000	cfu/g				
Oils,Fats and Grease		8240	mg/kg				
Salmonella spp [fresh]		Negative	in 25g				
EC [Neat]		5051	uS/cm				

Date

02/09/20

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Contact : STEPSIDE AGRI STEPSIDE FARM GWBERT ROAD CARDIGAN SA43 1PH Tel. : 01239 613 741 V850	Client : I	MR L JONES LAND AT TRWEINDS(TY GWYN FARM CARDIGAN	DR
Please quote the above code for all enquiries Sample Matrix : Agricultural Soil	Card I	Laboratory Reference Number 161	48/18
		Date Received Date Reported	17-Sep-18 18-Sep-18

SOIL ANALYSIS REPORT

Laboratory		Field Details			Index		mg/l (Available)		
Sample Reference	No.	Name or O.S. Reference with Cropping Details	Soil pH	Ρ	к	Mg	Р	к	Mg
70611/18	1	TRE-1-30 No cropping details given	5.0	2	0	1	16.4	52	45
70612/18	2	TRE-2-31 No cropping details given	5.7	2	0	1	19.6	36	42
70613/18	3	TRE-3-32 No cropping details given	5.8	2	1	2	23.8	64	59
70614/18	4	TRE-4-50 No cropping details given	5.7	2	1	2	23.6	80	58
70615/18	5	TRE-5-52 No cropping details given	5.6	2	0	1	16.8	34	41
70616/18	6	TRE-6-53 No cropping details given	6.0	3	2-	2	29.2	168	64

If general fertiliser and lime recommendations have been requested, these are given on the following sheets.

The analytical methods used are as described in DEFRA Reference Book 427

The index values are determined from the DEFRA Fertiliser Recommendations RB209 9th Edition.

Released by Joe Cherrie

On behalf of NRM Ltd

Date

18/09/18

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PAAG• Professional Agricultural Analysis Group



Contact : STEPSIDE AGRI STEPSIDE FARM GWBERT ROAD CARDIGAN SA43 1PH Tel. : 01239 613 741 V850	Client :	MR L JONES LAND AT TRWEINDS TY GWYN FARM CARDIGAN	OR
Please quote the above code for all enquiries Sample Matrix : Agricultural Soil	Card	Laboratory Reference	48/18
		Date Received Date Reported	17-Sep-18 18-Sep-18

SOIL ANALYSIS REPORT

Laboratory Field Details			Index			mg/l (Available)			
Sample Reference	No.	Name or O.S. Reference with Cropping Details	Soil pH	Ρ	К	Mg	Р	к	Mg
70617/18	7	TRE-7-51	58	R	2⊥	2	26.8	214	66
		No cropping details given	0.0	5	L T	-	20.0	217	00

If general fertiliser and lime recommendations have been requested, these are given on the following sheets.

The analytical methods used are as described in DEFRA Reference Book 427

The index values are determined from the DEFRA Fertiliser Recommendations RB209 9th Edition.

Released by Joe Cherrie

On behalf of NRM Ltd

Date

18/09/18

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PAAG• Professional Agricultural Analysis Group



SA43 1PL

Sampling Point No -	18588	Location -	WD261 - FD50 - TY GWYN FARM
Date Sampled -	22/12/2016	Time Taken -	14:50
Originator -	ENVIRONMENTAL	Purpose -	7.5 / 15cm FIELD SOIL SAMPLE
Laboratory -	GLASLYN	Lab Ref No -	E 4031275
Sampler -		Samplers Comments	
Туре -		No Results -	14

Code	Determinand Name	Units	Result	Limit
48	FLUORIDE (DRY WT)	MG/KG	22	
357	ARSENIC (DRY WT)	MG/KG	14.5	
380	SELENIUM (DRY WT)	MG/KG	0.35	
384	MOLYBDENUM (DRY WT)	MG/KG LT	1	
4620	pH on soil/sludge	PH UNITS	5.6	
7772	Extract Phosphorous	MG/L	18	
7773	Extractable Potassiu	MG/L	60	
9271	CADMIUM TOTAL	MG/KG	0.2	
9272	CHROMIUM TOTAL	MG/KG	46.9	
9273	COPPER TOTAL	MG/KG	16.3	
9274	MERCURY TOTAL	MG/KG LT	0.2	
9275	NICKEL TOTAL	MG/KG	19.9	
9276	LEAD TOTAL	MG/KG	20.3	
9277	ZINC TOTAL	MG/KG	72.6	



SA43 1PL

Sampling Point No -	18589	Location -	WD261 - FD51 - TY GWYN FARM
Date Sampled -	22/12/2016	Time Taken -	15:00
Originator -	ENVIRONMENTAL	Purpose -	7.5 / 15cm FIELD SOIL SAMPLE
Laboratory -	GLASLYN	Lab Ref No -	E 4031276
Sampler -		Samplers Comments	
Туре -		No Results -	14

Code	Determinand Name	Units	Result	Limit
48	FLUORIDE (DRY WT)	MG/KG	28	
357	ARSENIC (DRY WT)	MG/KG	14.3	
380	SELENIUM (DRY WT)	MG/KG	0.42	
384	MOLYBDENUM (DRY WT)	MG/KG LT	1	
4620	pH on soil/sludge	PH UNITS	6.1	
7772	Extract Phosphorous	MG/L	26	
7773	Extractable Potassiu	MG/L	94	
9271	CADMIUM TOTAL	MG/KG	0.2	
9272	CHROMIUM TOTAL	MG/KG	45.4	
9273	COPPER TOTAL	MG/KG	15	
9274	MERCURY TOTAL	MG/KG LT	0.2	
9275	NICKEL TOTAL	MG/KG	16.5	
9276	LEAD TOTAL	MG/KG	22	
9277	ZINC TOTAL	MG/KG	66.4	



SA43 1PL

Sampling Point No -	18590	Location -	WD261 - FD52 - TY GWYN FARM
Date Sampled -	22/12/2016	Time Taken -	15:10
Originator -	ENVIRONMENTAL	Purpose -	7.5 / 15cm FIELD SOIL SAMPLE
Laboratory -	GLASLYN	Lab Ref No -	E 4031277
Sampler -		Samplers Comments	
Туре -		No Results -	14

Code	Determinand Name	Units	Result	Limit
48	FLUORIDE (DRY WT)	MG/KG	23	
357	ARSENIC (DRY WT)	MG/KG	15.5	
380	SELENIUM (DRY WT)	MG/KG	0.38	
384	MOLYBDENUM (DRY WT)	MG/KG LT	1	
4620	pH on soil/sludge	PH UNITS	6.2	
7772	Extract Phosphorous	MG/L	13	
7773	Extractable Potassiu	MG/L	67	
9271	CADMIUM TOTAL	MG/KG	0.2	
9272	CHROMIUM TOTAL	MG/KG	47.1	
9273	COPPER TOTAL	MG/KG	16.9	
9274	MERCURY TOTAL	MG/KG LT	0.2	
9275	NICKEL TOTAL	MG/KG	20.6	
9276	LEAD TOTAL	MG/KG	20.5	
9277	ZINC TOTAL	MG/KG	71.6	



SA43 1PL

Sampling Point No -	18591	Location -	WD261 - FD53 - TY GWYN FARM
Date Sampled -	22/12/2016	Time Taken -	15:20
Originator -	ENVIRONMENTAL	Purpose -	7.5 / 15cm FIELD SOIL SAMPLE
Laboratory -	GLASLYN	Lab Ref No -	E 4031278
Sampler -		Samplers Comments	
Туре -		No Results -	14

Code	Determinand Name	Units	Result	Limit
48	FLUORIDE (DRY WT)	MG/KG	29	
357	ARSENIC (DRY WT)	MG/KG	14.2	
380	SELENIUM (DRY WT)	MG/KG	0.42	
384	MOLYBDENUM (DRY WT)	MG/KG LT	1	
4620	pH on soil/sludge	PH UNITS	5.8	
7772	Extract Phosphorous	MG/L	22	
7773	Extractable Potassiu	MG/L	114	
9271	CADMIUM TOTAL	MG/KG	0.2	
9272	CHROMIUM TOTAL	MG/KG	46	
9273	COPPER TOTAL	MG/KG	14.7	
9274	MERCURY TOTAL	MG/KG LT	0.2	
9275	NICKEL TOTAL	MG/KG	17.3	
9276	LEAD TOTAL	MG/KG	20	
9277	ZINC TOTAL	MG/KG	64.6	



SA43 1PL

Sampling Point No -	148396	Location -	WD261 - FD29 - TY GWYN FARM
Date Sampled -	22/12/2016	Time Taken -	11:40
Originator -	ENVIRONMENTAL	Purpose -	7.5 / 15cm FIELD SOIL SAMPLE
Laboratory -	GLASLYN	Lab Ref No -	E 4031256
Sampler -		Samplers Comments	
Туре -		No Results -	14

Code	Determinand Name	Units	Result	Limit
48	FLUORIDE (DRY WT)	MG/KG	26	
357	ARSENIC (DRY WT)	MG/KG	13.7	
380	SELENIUM (DRY WT)	MG/KG	0.42	
384	MOLYBDENUM (DRY WT)	MG/KG LT	1	
4620	pH on soil/sludge	PH UNITS	5.4	
7772	Extract Phosphorous	MG/L	17	
7773	Extractable Potassiu	MG/L	51	
9271	CADMIUM TOTAL	MG/KG	0.2	
9272	CHROMIUM TOTAL	MG/KG	39.6	
9273	COPPER TOTAL	MG/KG	14.7	
9274	MERCURY TOTAL	MG/KG LT	0.2	
9275	NICKEL TOTAL	MG/KG	17.5	
9276	LEAD TOTAL	MG/KG	20.9	
9277	ZINC TOTAL	MG/KG	66.4	



SA43 1PL

Sampling Point No -	148397	Location -	WD261 - FD30 - TY GWYN FARM
Date Sampled -	22/12/2016	Time Taken -	11:50
Originator -	ENVIRONMENTAL	Purpose -	7.5 / 15cm FIELD SOIL SAMPLE
Laboratory -	GLASLYN	Lab Ref No -	E 4031257
Sampler -		Samplers Comments	
Туре -		No Results -	14

Code	Determinand Name	Units	Result	Limit
48	FLUORIDE (DRY WT)	MG/KG	30	
357	ARSENIC (DRY WT)	MG/KG	15.2	
380	SELENIUM (DRY WT)	MG/KG	0.45	
384	MOLYBDENUM (DRY WT)	MG/KG LT	1	
4620	pH on soil/sludge	PH UNITS	5	
7772	Extract Phosphorous	MG/L	24	
7773	Extractable Potassiu	MG/L	60	
9271	CADMIUM TOTAL	MG/KG	0.2	
9272	CHROMIUM TOTAL	MG/KG	42	
9273	COPPER TOTAL	MG/KG	14.6	
9274	MERCURY TOTAL	MG/KG LT	0.2	
9275	NICKEL TOTAL	MG/KG	17.6	
9276	LEAD TOTAL	MG/KG	75.8	
9277	ZINC TOTAL	MG/KG	66.1	



SA43 1PL

Sampling Point No -	148398	Location -	WD261 - FD31 - TY GWYN FARM
Date Sampled -	22/12/2016	Time Taken -	12:00
Originator -	ENVIRONMENTAL	Purpose -	7.5 / 15cm FIELD SOIL SAMPLE
Laboratory -	GLASLYN	Lab Ref No -	E 4031258
Sampler -		Samplers Comments	
Туре -		No Results -	14

Code	Determinand Name	Units	Result	Limit
48	FLUORIDE (DRY WT)	MG/KG	24	
357	ARSENIC (DRY WT)	MG/KG	23.9	
380	SELENIUM (DRY WT)	MG/KG	0.38	
384	MOLYBDENUM (DRY WT)	MG/KG LT	1	
4620	pH on soil/sludge	PH UNITS	5.2	
7772	Extract Phosphorous	MG/L	28	
7773	Extractable Potassiu	MG/L	63	
9271	CADMIUM TOTAL	MG/KG	0.2	
9272	CHROMIUM TOTAL	MG/KG	42.2	
9273	COPPER TOTAL	MG/KG	15	
9274	MERCURY TOTAL	MG/KG LT	0.2	
9275	NICKEL TOTAL	MG/KG	20.8	
9276	LEAD TOTAL	MG/KG	18.2	
9277	ZINC TOTAL	MG/KG	70.1	



SA43 1PL

Sampling Point No -	148399	Location -	WD261 - FD32 - TY GWYN FARM
Date Sampled -	22/12/2016	Time Taken -	12:10
Originator -	ENVIRONMENTAL	Purpose -	7.5 / 15cm FIELD SOIL SAMPLE
Laboratory -	GLASLYN	Lab Ref No -	E 4031259
Sampler -		Samplers Comments	
Туре -		No Results -	14

Code	Determinand Name	Units	Result	Limit
48	FLUORIDE (DRY WT)	MG/KG	30	
357	ARSENIC (DRY WT)	MG/KG	14.1	
380	SELENIUM (DRY WT)	MG/KG	0.45	
384	MOLYBDENUM (DRY WT)	MG/KG LT	1	
4620	pH on soil/sludge	PH UNITS	5.2	
7772	Extract Phosphorous	MG/L	27	
7773	Extractable Potassiu	MG/L	65	
9271	CADMIUM TOTAL	MG/KG	0.2	
9272	CHROMIUM TOTAL	MG/KG	40.9	
9273	COPPER TOTAL	MG/KG	14.3	
9274	MERCURY TOTAL	MG/KG LT	0.2	
9275	NICKEL TOTAL	MG/KG	18	
9276	LEAD TOTAL	MG/KG	19.9	
9277	ZINC TOTAL	MG/KG	67.6	



DAVID J POWELL PURLON FARM WICK ROAD LLANTWIT MAJOR VALE OF GLAMORGAN CF61 1YU

AN	V741
Please quote above cod	e for all enquiries

M DAVIES HAFOD FARM FERWIG CARDIGAN SA43 1PU SOIL LATE REQUEST

Report Number

Sample Number

Laboratory References

Soil nH

imum normiccible concentration

99009

381760

Date Received12-APR-2018Date Reported18-APR-2018

ANALYTICAL RESULTS on 'dry matter' basis.

98.3

2

рН ⁽¹⁾

P						•••• p			
Determinand	Result		4	5	6		7	8	9
Soil pH	5.7								
Soil Nutrients ⁽¹⁾						Soil Index			
Determinand	Result mg/litre	Soil Index	0	1	2	3	4	5	6
Soil Phosphorus as P	13.4	1							
Soil Potassium as K	83.4	1							

Potentially Toxic Elements ⁽²⁾

Soil Magnesium as Mg

Totentially Toxic Liements				of PTE in arable/grasssland soil						
Determinand	Result mg/kg		Maximum mg/kg	0%	25%	% 5	0% 75	5% 100%		
Total Copper as Cu	123	Arable	100							
	12.5	Grassland	170							
Total Zinc as Zn	62.8	Arable	200							
	02.0	Grassland	200							
Total Nickel as Ni	16.7	Arable	60							
	10.1	Grassland	100							
Total Cadmium as Cd	0.21	Arable	3							
	0.21	Grassland	3							
Total Lead as Ph	19 1	Arable	300							
Total Lead as T b	13.1	Grassland	300							
Total Chromium as Cr	31.8	Arable	400							
	01.0	Grassland	600							
Total Mercury as Ho	-0.2	Arable	1							
Total Mercury as Fig	< 0.2	Grassland	1.5		1					

Recommendations for liming and fertiliser should be obtained from Defra's Fertiliser Manual (RB209). The analytical methods used are as described in Defra's RB427.
 Concentration of Potentially Toxic Elements (PTE, commonly referred to as 'heavy metals') are in mg/kg dry soil. The maximum and the percentage of this maximum permissible concentration of PTE in soil are derived from the values in Defra's Code of Practice for Agricultural Use of Sewage Sludge (England & Wales) 1996. If applying organic manures to this soil it is important to ensure the soil is managed with a pH no less than 5.0, and that the PTE maximum values are not exceeded following the application. For soil where the pH value is less than 5.2, a FACTS Qualified Adviser should be consulted. Further details are provided in the Sludge Code.

Released by JDoyle

18/04/18 Date

NRM Coopers Bridge, Braziers Lane, Bracknell, Berkshire RG42 6NS Tel: +44 (0) 1344 886338 Fax: +44 (0) 1344 890972 Email: enquiries@nrm.uk.com www.nrm.uk.com



DAVID J POWELL PURLON FARM WICK ROAD LLANTWIT MAJOR VALE OF GLAMORGAN CF61 1YU

V741

Please quote above code for all enquiries

Date Received	12-APR-2018
Date Reported	18-APR-2018

ANALYTICAL RESULTS on 'dry matter' basis.

M DAVIES
HAFOD FARM
FERWIG
CARDIGAN
SA43 1PU
SOIL LATE REQUEST

Laboratory References Report Number 99009 Sample Number 381760

Potentially Toxic Elements	(2)	% of maximum permissible concentration of PTE in arable/grasssland soil						
Determinand	Result mg/kg		Maximum mg/kg	0%	25%	50%	75%	100%
Total Molybdenum as Mo	<1	Arable Grassland	4 4					
Total Selenium as Se	0.30	Arable Grassland	3 5					
Total Arsenic as As	11.4	Arable Grassland	50 50					
Fluoride as Fl	36.9	Arable Grassland	500 500					

(1) Recommendations for liming and fertiliser should be obtained from Defra's Fertiliser Manual (RB209). The analytical methods used are as described in Defra's RB427.

(2) Concentration of Potentially Toxic Elements (PTE, commonly referred to as 'heavy metals') are in mg/kg dry soil. The maximum and the percentage of this maximum permissible concentration of PTE in soil are derived from the values in Defra's Code of Practice for Agricultural Use of Sewage Sludge (England & Wales) 1996. If applying organic manures to this soil it is important to ensure the soil is managed with a pH no less than 5.0, and that the PTE maximum values are not exceeded following the application. For soil where the pH value is less than 5.2, a FACTS Qualified Adviser should be consulted. Further details are provided in the Sludge Code.

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DAVID J POWELL PURLON FARM WICK ROAD LLANTWIT MAJOR VALE OF GLAMORGAN CF61 1YU

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Please quote above cod	e for all enquiries

M DAVIES HAFOD FARM FERWIG CARDIGAN SA43 1PU SOIL LATE REQUEST

Report Number

Sample Number

Laboratory References

Soil nH

99009

381761

Date Received12-APR-2018Date Reported18-APR-2018

ANALYTICAL RESULTS on 'dry matter' basis.

рН ⁽¹⁾

pii									
Determinand	Result		4	5	6		7	8	9
Soil pH	5.6			•					
Soil Nutrients ⁽¹⁾						Soil Index			
Determinand	Result mg/litre	Soil Index	0	1	2	3	4	5	6
Soil Phosphorus as P	14.8	1							
Soil Potassium as K	113	1							
Soil Magnesium as Mg	107	3		•	I				

Potentially Toxic Elements ⁽²⁾

Fotentially Toxic Liements					of P	of PTE in arable/grasssland soil			
Determinand	Result mg/kg		Maximum mg/kg	0%	25%	50%	75%	100%	
Total Copper as Cu	11.7	Arable	100						
Total Zinc as Zn	64.2	Arable	200 200						
Total Nickel as Ni	20.8	Arable Grassland	60 100						
Total Cadmium as Cd	0.15	Arable Grassland	3 3						
Total Lead as Pb	18.3	Arable Grassland	300 300						
Total Chromium as Cr	35.2	Arable Grassland	400 600						
Total Mercury as Hg	<0.2	Arable Grassland	1 1.5						

Recommendations for liming and fertiliser should be obtained from Defra's Fertiliser Manual (RB209). The analytical methods used are as described in Defra's RB427.
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Total Molybdenum as Mo	<1	Arable Grassland	4 4						
Total Selenium as Se	0.30	Arable Grassland	3 5						
Total Arsenic as As	11.4	Arable Grassland	50 50						
Fluoride as Fl	26.7	Arable Grassland	500 500						

(1) Recommendations for liming and fertiliser should be obtained from Defra's Fertiliser Manual (RB209). The analytical methods used are as described in Defra's RB427.

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